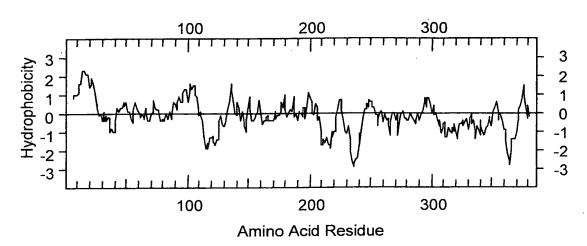
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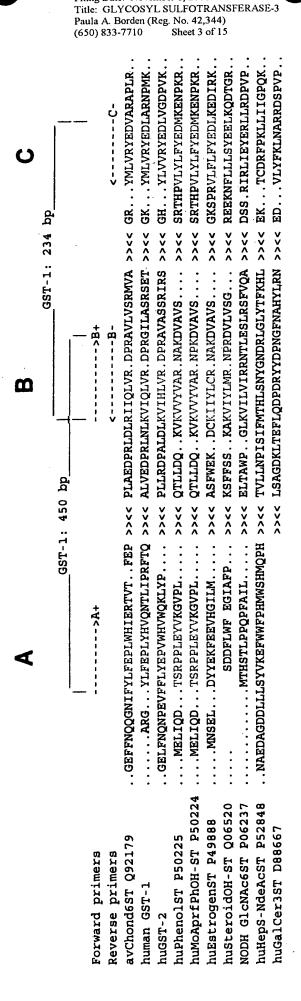
FIG. 1

ggctcgaggccaggatgcctccagtctgggggaaaatgcttcctcatttgcttctcccagcccacctcaagcagtctccc caccccttgagtctcagcagtgttaaagctgttactttcacagcttcctgggagcgagtgctttctcaagcccgtcttgc	80 160
${f a}$ aggtettecactteageacaATGCTACTGCCTAAAAAAATGAAGCTCCTGCTGTTTCTGGTTTCCCAGATGGCCATCTT M L L P K K M K L L L F L V S Q M A I L	240
GGCTCTATTCTTCCACATGTACAGCCACAACATCAGCTCCCTGTCTATGAAGGCACAGCCCGAGCGCATGCACGTGCTGG A L F F H M Y S H N I S S L S M K A Q P E R M H V L V	320
TTCTGTCTTCCTGGCGCTCTGGCTCTTTTTGTGGGGCAGCTTTTTGGGCAGCACCCAGATGTTTTCTACCTGATGGAG LSSWRSGSSFVGQLFGQHPDVFYLME	400
CCCGCCTGGCACGTGTGGATGACCTTCAAGCAGAGCACCGCCTGGATGCTGCACATGGCTGTGCGGGATCTGATACGGGCP.AWHVWMTFKQSTAWMLHMAVRDLIRA	480
CGTCTTCTTGTGCGACATGAGCGTCTTTGATGCCTACATGGAACCTGGTCCCCGGAGACAGTCCAGCCTCTTTCAGTGGG V F L C D M S V F D A Y M E P G P R R Q S S L F Q W E	560
AGAACAGCCGGGCCCTGTGTCTGCACCTGCCTGTGACATCATCCCACAAGATGAAATCATCCCCCGGGCTCACTGCAGG NSRALCSAPACDIIPQDEIIPRAHCR	640
CTCCTGTGCAGTCAACAGCCCTTTGAGGTGGTGGAGAAGGCCTGCCGCTCCTACAGCCACGTGGTGCTCAAGGAGGTGCG L L C S Q Q P F E V V E K A C R S Y S H V V L K E V R	720
CTTCTTCAACCTGCAGTCCCTCTACCCGCTGCTGAAAGACCCCTCCCT	800
CCCGGGCCGTGTTCCCGAGAACGCACAAAGGGAGATCTCATGATTGACAGTCGCATTGTGATGGGGCAGCATGAG R A V F R S R E R T K G D L M I D S R I V M G Q H E	880
CAGAAACTCAAGAAGGAGGACCAACCCTACTATGTGATGCAGGTCATCTGCCAAAGCCAGCTGGAGATCTACAAGACCAT Q K L K K E D Q P Y Y V M Q V I C Q S Q L E I Y K T I	960
CCAGTCCTTGCCCAAGGCCCTGCAGGAACGCTACCTGCTTGTGCGCTATGAGGACCTGGCTCGAGCCCCTGTGGCCCAGA 1 Q S L P K A L Q E R Y L L V R Y E D L A R A P V A Q T	.040
CTTCCCGAATGTATGAATTCGTGGGATTGGAATTCTTGCCCCATCTTCAGACCTGGGTGCATAACATCACCCGAGGCAAG 1 SRMYEFVGLEFLPHLQTWVHNITRGK	.120
GGCATGGGTGACCACGCTTTCCACACAAATGCCAGGGATGCCCTTAATGTCTCCCAGGCTTGGCGCTGGTCTTTGCCCTA 1 G M G D H A F H T N A R D A L N V S Q A W R W S L P Y	.200
IGAAAAGGTTTCTCGACTTCAGAAAGCCTGTGGCGATGCCATGAATTTGCTGGGCTACCGCCACGTCAGATCTGAACAAG 1 $$ E $$ K $$ V $$ S $$ R $$ L $$ Q $$ K $$ A $$ C $$ G $$ D $$ A $$ M $$ N $$ L $$ L $$ G $$ Y $$ R $$ H $$ V $$ R $$ S $$ E $$ Q $$ E	.280
AACAGAGAAACCTGTTGCTGGATCTTCTGTCTACCTGGACTGTCCCTGAGCAAATCCACTAAgagggttgagaaggcttt 1 Q R N L L L D L L S T W T V P E Q I H \star	.360
getgecacetggtgteageeteagteactttetetgaatgettetgageettgeetacatetetgageettaactacatg 1 tetgtgggtateacactgagtgtgagttgtgteeacacegtgeteaageagaaggaettttgtgteeatgettgtgtetag 1 aaaacagactggggaacettatgtgageageacateeeaceagtgaaacagggtattgetettettettttett	.520 .600 .680 .760 .840

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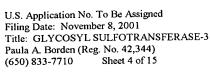
FIG. 2

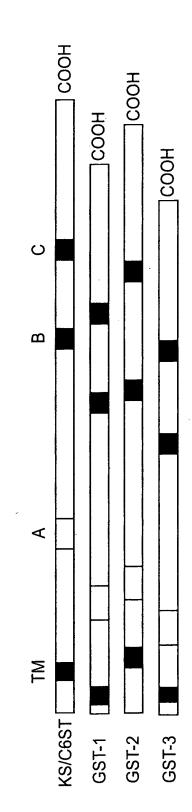




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FIG.





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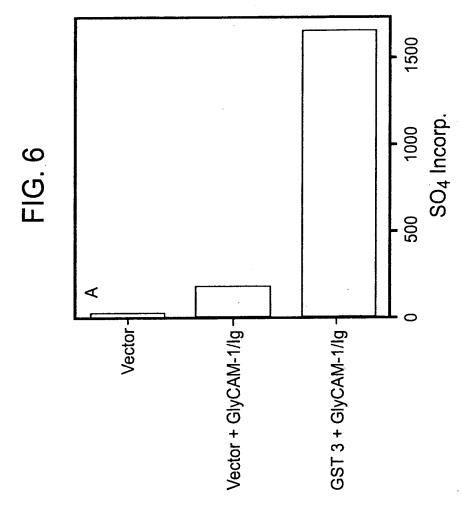
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Glcnac6ST TWRSGSSFVGQLFNQNPEVFELYEPVWHV
KSGal6ST TTRSGSSFVGQLFNQHLDVFYLFEPLYHV
C6ST TTRTGSSFVGEFFNQDGNIFYLFEPLWHI

249 270
HEC-Glcnac6ST DPRLDLKVIHLVRDPRAVASSR
KSGal6ST DPRLDLKVIHLVRDPRAVASSR
C6ST DPRLDLKVILQLVRDPRAVLASR
C6ST DPRLDLKVILQLVRDPRAVLASR
C6ST DPRLDLKVILGVRDPRAVLASR
HEC-Glcnac6ST PRALQERYLLVRYEDIARAP

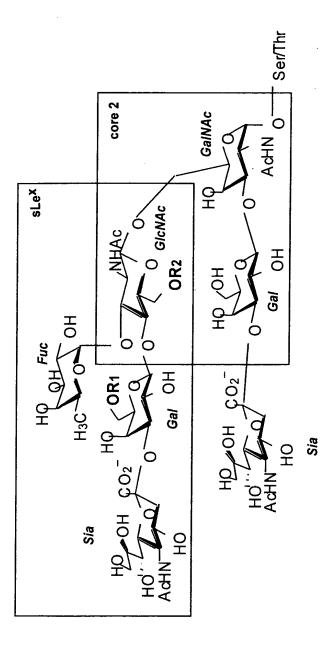
FIG. 5

GlcNAc6ST

KSGal6ST C6ST U.S. Application No. To Be Assigned Filing Date: November 8, 2001 Title: GLYCOSYL SULFOTRANSFERASE-3 Paula A. Borden (Reg. No. 42,344) (650) 833-7710 Sheet 6 of 15



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6-sulfo sLe^X R1 = H, R2 = SO3- :

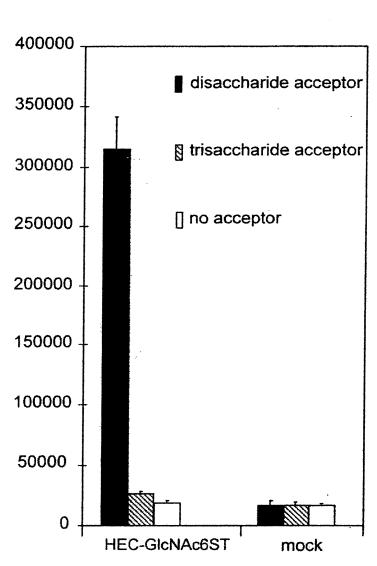
6'-sulfo sLe^X $R1 = SO_3$, R2 = H

6',6-disulfo sLeX $R1 = R2 = SO_3$ -

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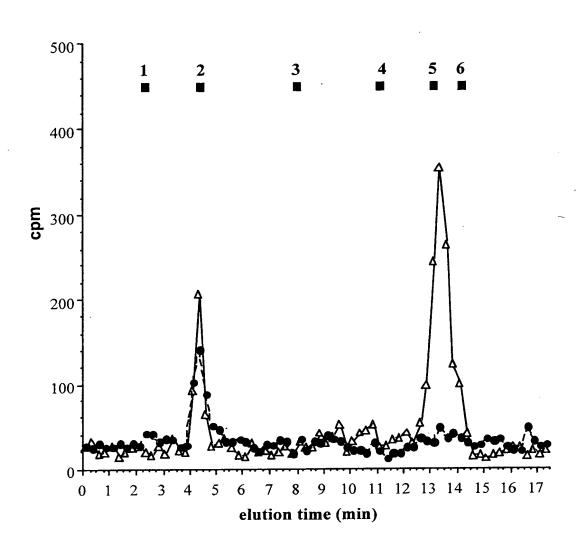
FIG. 8





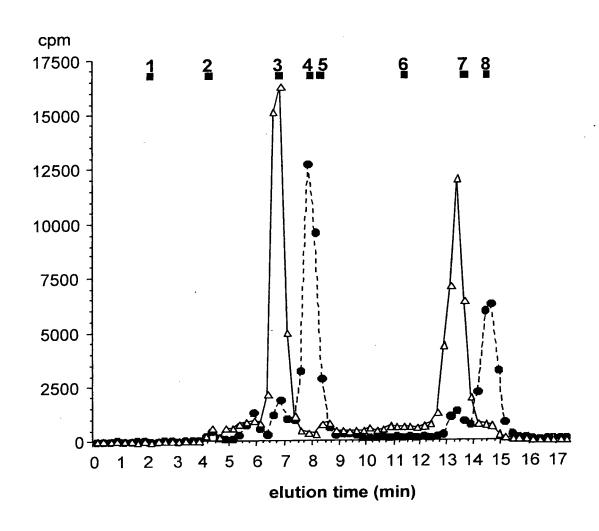
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FIG. 9

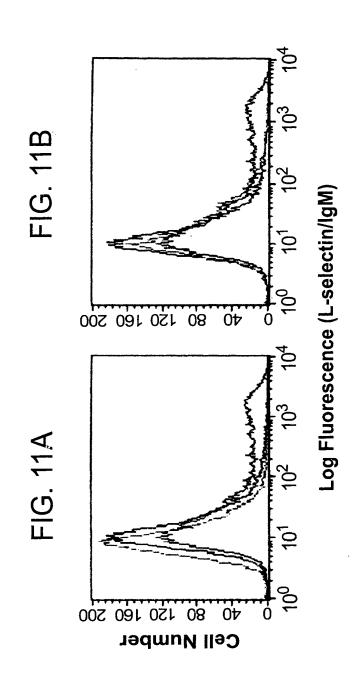


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FIG. 10

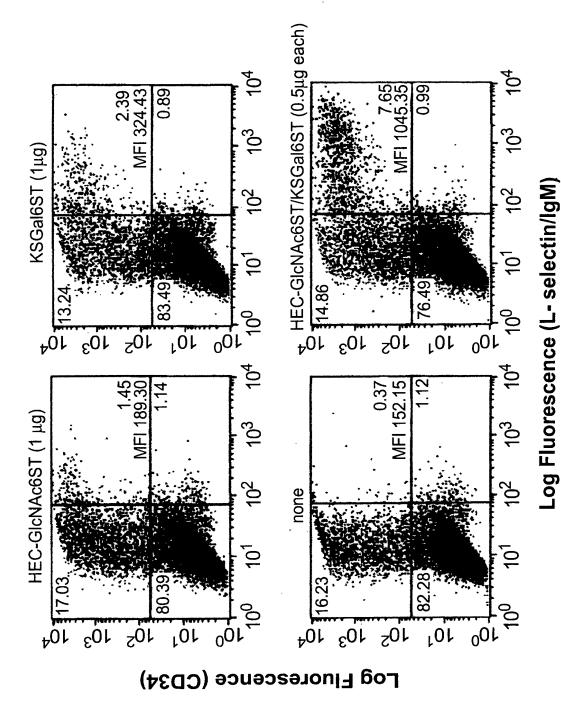


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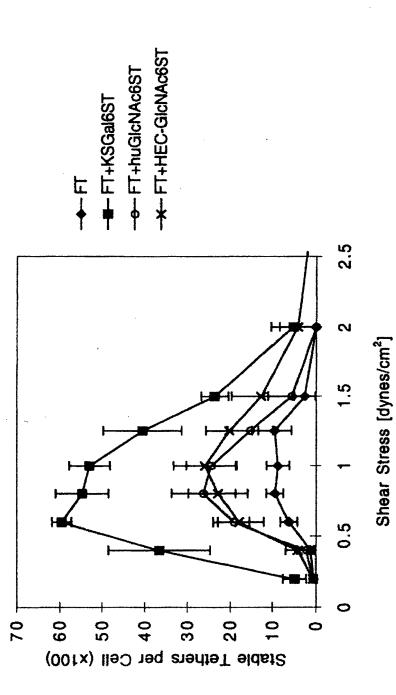


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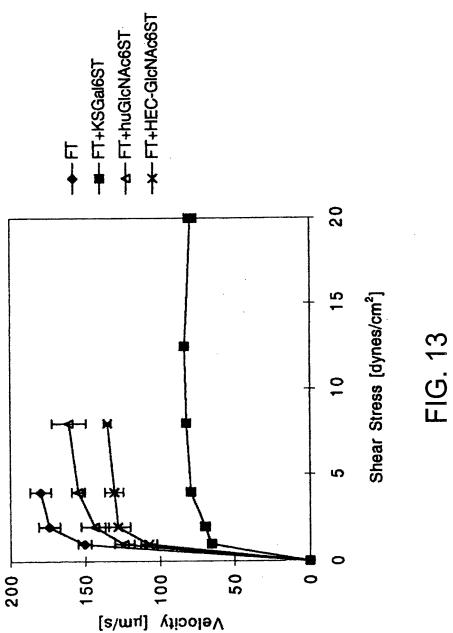
FIG. 11C



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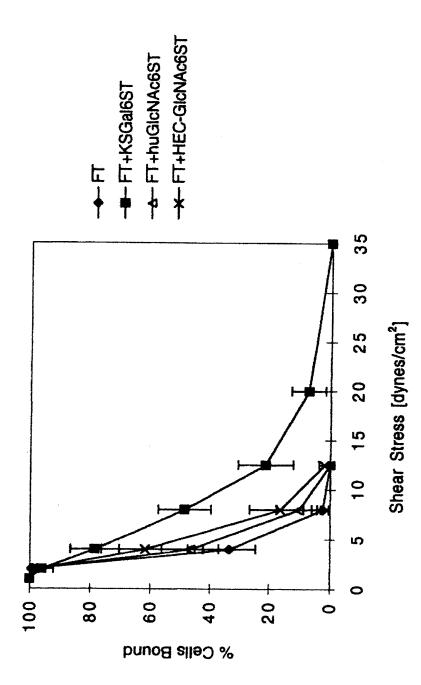


FIG. 14